

*Application No. 09/428,679
Amndt. dated: October , 2005
Reply to Office Action mailed: August 19, 2005*

REMARKS/ARGUMENTS

Claims 6-12, 15-18, 20, 22-26, 28, 29 and 31-36 are pending in this application. Claims 6, 12, 17, 23, 28, 32 and 33 have been amended. Claims 27 and 30 have been cancelled. No new claims have been added. All pending claims are believed to be in condition for allowance and reconsideration is requested.

Allowance of claim 31 and the indication of allowability of claims 7, 27 and 30 if rewritten in independent form have been noted with appreciation. Claims 23 and 28 have been amended to incorporate the subject matter of claims 27 and 30, respectively and thus should be in condition for allowance.

Amended claim 32 now includes features corresponding to those on the basis of which the Examiner stated claim 31 is allowable, as well as including "high resolution" and "selected lower resolution" features recited in claim 27, indicated to contain allowable subject matter. Claim 32 recites, in pertinent part,

each workstation storing three dimensional scene objects . . .
collectively representing a high resolution three dimensional scene; the first computer storing an object identifier for each three dimensional scene object stored at the plurality of workstations; the first computer operable to send . . . a retrieval request to the plurality of workstations, the retrieval request including object identifiers and storage locations associated with a selected plurality of said stored three dimensional scene objects . . . ; the workstations operable in parallel to retrieve and process three dimensional scene objects stored at individual ones of the workstations identified by the object identifiers in the retrieval request to create respective meshes of the retrieved three dimensional scene objects at a selected lower resolution . . .;

Accordingly, claim 32 is believed to be in condition for allowance.

Amended claims 6, 12, 17, and 33 are in condition for allowance based, at least in part, on the following recitations:

Claim 6: ". . . processing the received LOD mesh representations in a graphics rendering pipeline in the first computer to create solely from the received LOD mesh representations, a display image of a three dimensional scene."

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Claim12: ". . . wherein the visualization console is operable under user control to communicate requests . . . including identifiers of selected ones of the three dimensional objects stored at the workstations representing a complete selected view of the three dimensional scene; the workstations . . . create LOD representations of the respective stored three dimensional objects identified by the requests received from the visualization console for assembling the complete selected view of the three dimensional scene . . . the visualization console graphics processor to create a composite image display representation by the visualization console display of the selected view of the three dimensional scene, assembled solely from the LOD mesh representations communicated by the workstations to the visualization console."

Claim 17: ". . .the visualization console including graphics processing means for creating from the received LOD representations of the three dimensional objects, an image display by said visualization console of a three dimensional scene assembled completely from said received LOD representations."

Claim33: ". . . the first computer is operable to create on said display a representation of the selected view of the three dimensional scene assembled solely from the three dimensional scene object meshes received from the workstations."

Claims 6, 12, 17 and 33 are not rendered unpatentable under 35 USC 103 by US Patent 5,675,721 (Freedman) in view of US Patent 6,330,583) Reiffin.

Freedman

In Freedman's system all of the computers (i.e. both the "user's" (local) computer and the "remote" computers) run "an application program that enables that computer to act as a network node." The "user's computer not only objects it owns, but also retains local copies of all perceivable objects that it has requested. The retained local copies contain only the information that is necessary to perform the processing tasks currently needed by the user's computer. In other words, the "user" computer itself carries out required processing using perceivable objects it owns and (to the extent it has stored information) relating to objects it does not own. "If a local perceivable object copy does not have certain necessary information, the user's computer requests the information over the network and obtains the needed

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information from another copy of the perceivable object on another network computer." – col. 6, lines 33-43; see also col. 5, lines 41-45. The "users computer" in Freedman processes perceivable object(s), whether stored locally or received from a remote computer (col. 14, lines 11-24) to create object representations at a level required by a user. In addition, every computer in Freedman's system can transmit an object it owns to any other requesting computer - col. 5, lines 39-51. Thus, in Freedman each computer in the system is an active participant in processing tasks on perceivable objects.

Freedman's teaching is distinct from and does not suggest, but explicitly teaches away from, the functional operations required in each of claims 6, 12, 17 and 33 noted above, in which the "other computers" (claim 6) or "workstations (claims 12, 17, 33) perform processing to create "LOD mesh representations" (claim 6), "LOD representations" (claims 12, 17) or "meshes" (claim 33) of selected objects, and "the first computer" (claims 6, 33) or "visualization console" (claims 12, 17, 33) create a display based "solely" (claims 6, 12, 33) or "completely (claim 17) on the received "LOD mesh representations" (claim 6), "LOD representations" (claims 12, 17) or "meshes" (claim 33).

Reiffin

Reiffin does not remedy the deficiencies of Freedman but instead emphasizes Freedman's teaching that all computers are fully functional as network nodes. In Reiffin, in a network of interconnected computers operating in a time-slice mode of execution, each computer can execute its own local task in the foreground while concurrently executing a subtask in the background. The computer selects a subtask identifier from a pool of subtask identifiers stored on a network disk drive, and copies the corresponding subtask from the originating computer – Reiffin col. 2, lines 10-33. Again, this contrasts with and teaches away from the functional operations required in each of claims 6, 12, 17 and 33 set forth and discussed above.

Thus, each of claims 6, 12 17, and 33 is believed patentable and in condition for allowance. Claims 7, 9, 10 and 11 (dependent from claim 6), 15, 16 (dependent from claim 12), 18, 20, 21 (dependent from claim 17), and 34-36 (dependent from claim 33) are believed to be

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patentable for at least the same reasons as those advanced in respect of their parent claims, and to be in condition for allowance.

For completeness, it is noted the Examiner has not addressed the traversal of the rejections based on Freedman in view of Reiffin, set forth in details in the Response filed Jul 7 8, 2004 at pages 13-15 under the heading "Freedman in view of Reiffin". Applicant reiterates those arguments.

CONCLUSION:

Favorable consideration and early allowance of the pending claims are respectfully solicited. If there are any remaining issues that could be resolved by discussion, a telephone call to the undersigned attorney at (425) 402-4638 would be appreciated.

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